Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (previously presented) A device for predistorting a transmission signal to be transmitted over a nonlinear transmission path, comprising:

an estimator for determining an error signal depending on the transmission signal and a previously registered transfer characteristic of the nonlinear transmission path, where the error signal represents an estimate of an error generated due to the nonlinearity of the transmission path;

a time-dispersive element for generating a correction signal by a temporal extension of the error signal; and

a combiner for combining the transmission signal and the correction signal,

wherein, due to the temporal extension of the error signal, an error signal segment in the frequency spectrum of a transmission signal transmitted by the nonlinear transmission path is shifted away from the useful frequency range of the signal.

2.   (Previously presented) A device according to claim 1, wherein the nonlinear transmission path is a power amplifier.

3.   (Previously presented) A device according to claim 1, wherein the estimator has a unit for forming the squares of the magnitudes of the transmission signal to be transmitted and a table for supplying complex distortion coefficients, which depend on the squares of the

magnitudes and on the previously registered transfer characteristic of the nonlinear transmission path.

4.   (Previously presented) A device according to claim 3, wherein the unit for forming the squares of the magnitudes of the real and the imaginary part of the transmission signal is provided.

5.   (Previously presented) A device according to claim 1, wherein the estimator has an envelope detector for detecting the envelope of the transmission signal, a quantizer for forming quantized envelope values and a table unit for supplying complex distortion coefficients which depend on the quantized envelope values and on the previously registered transfer characteristic of the nonlinear trans-mission path.

6.   (Previously presented) A device according to claim 3 wherein the estimator also includes a unit for combining the squares of the magnitudes or of the envelope values and the complex coefficients for generating the error signal.

7.   (Previously presented) A device according to claim 1, wherein the time-dispersive element is a time-dispersive bandpass filter or low-pass filter.

8.   (Previously presented) A device according to claim 7, wherein an adapter is provided which, on the basis of a signal to be transmitted and an output signal output by a nonlinear transmission path if there is no predistortion, ascertains the transfer characteristic of

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the nonlinear transmission path and uses this to control the estimator and/or the filter coefficients of the time-dispersive bandpass filter or low-pass filter.

9.   (Previously presented) A device according to claim 8, wherein the adapter ascertains the transfer characteristic at predetermined times.

10.   (Previously presented) A high-frequency transmitter comprising:

a predistorter for predistorting a transmission signal to be transmitted over a nonlinear transmission path, said predistorter comprising:

an estimator for determining an error signal depending on the transmission signal and a previously registered transfer characteristic of the nonlinear transmission path, where the error signal represents an estimate of an error generated due to the nonlinearity of the transmission path;

a time-dispersive element for generating a correction signal by a temporal extension of the error signal; and

a combiner for combining the transmission signal and the correction signal,

wherein, due to the temporal extension of the error signal, an error signal segment in the frequency spectrum of a transmission signal transmitted by the nonlinear transmission path is shifted away from the useful frequency range of the signal according to one of the claims 1 to 9;

a power amplifier for amplifying a transmission signal which has been predistorted by the predistorter; and

a bandpass filter which succeeds the power amplifier and whose transmission band is adjusted to the useful frequency range of the transmission signal.

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11.   (Previously presented) A method for predistorting a transmission signal to be transmitted over a nonlinear transmission path, comprising the following steps:

generating an error signal from the transmission signal to be transmitted and a previously registered transfer characteristic of the nonlinear transmission path, wherein the error signal represents an estimate of an error generated due to the nonlinearity of the transmission path;

effecting a temporal extension of the error signal to generate a correction signal;

combining the correction signal and the transmission signal to be transmitted to generate a predistorted transmission signal,

wherein, due to the temporal extension of the error signal, an error signal segment in the frequency spectrum of a transmission signal transmitted by the nonlinear transmission path is shifted away from the useful frequency range of the trans-mission signal.

12.   (Previously presented) A method for spectrally forming an interference spectrum of a transmission signal at the output of a power transmitter, said method comprising the steps of:

generating an error signal from the transmission signal and a previously registered transfer characteristic of a power amplifier, wherein the error signal represents an estimate of an error generated due to a nonlinearity of the power amplifier;

effecting a temporal extension of the error signal to generate a correction signal;

combining the correction signal and the transmission signal to generate a predistorted transmission signal,

wherein , due to the temporal extension of the error signal, an error signal segment in the frequency spectrum of a transmission signal transmitted by the power amplifier is shifted away from the useful frequency range of the transmission signal; and

feeding the predistorted transmission signal (S1') into the power amplifier.

13.   (Previously presented) A method according to claim 12, which also includes the step of performing bandpass filtering of an output signal output by the power amplifier.

14.   (new) A device according to claim 1, wherein coefficients of the time-dispersive element are determined in advance from the transfer characteristic of the nonlinear transmission path.

15.   (new) A high-frequency transmitter according to claim 10, wherein coefficients of the time-dispersive element are determined in advance from the transfer characteristic of the nonlinear transmission path.

16.   (new) A method according to claim 11, wherein the temporal extension of the error signal is effected making use of a time-dispersive element, and wherein coefficients of the time-dispersive element are determined in advance from the transfer characteristic of the nonlinear transmission path.

17.   (new) A method according to claim 12, wherein the temporal extension of the error signal is effected making use a time-dispersive element, and wherein coefficients of the

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time-dispersive element are determined in advance from the transfer characteristic of the nonlinear transmission path.